Summary

1. Introduction

The 75th Street Corridor Improvement Project (CIP) is a major element of the CREATE (Chicago Region Environmental and Transportation Efficiency) Program. The CREATE Program was initiated in 2003 as a public-private partnership to improve the rail and roadway transportation network within the Chicago region.

The *CREATE Program Final Feasibility Plan* and *Final Preliminary Screening* documents were drafted in 2005 to establish overall "Program Level Goals and Strategies" and to define the objective of each component project within the Program. There are currently 70 individual projects included in the CREATE Program, all designed to improve the movement of passengers and freight on the railway system, and to reduce delays to travelers on the roadway system.

Funding for the CREATE Program will be provided by a combination of public and private contributions. The eight participating freight railroads will provide an amount equal to the potential economic benefits they expect to receive from the Program.[1] The remaining funds will come from federal, state, and local governments.

The 75th Street CIP is located in a rail corridor that generally follows 75th Street on the south and southwest sides of the City of Chicago (see Figure S-1). The entire study area of the 75th Street CIP has been fully urbanized for many decades, with no remaining "natural" areas.

The 75th Street CIP includes four CREATE Program elements originally identified as separate components of the CREATE Program but which were subsequently determined to be linked logistically and environmentally, and are now all addressed in this single Environmental Impact Statement (EIS):

CREATE Partners:

- Federal Highway Administration (FHWA)
- Illinois Department of Transportation (IDOT)
- Chicago Department of Transportation (CDOT)
- Association of American Railroads (AAR)

AAR Members:

- Amtrak
- BNSF Railway Company (BNSF)
- CN Railway Company (CN)
- Canadian Pacific Railway Company (CP)
- CSX Transportation (CSX)
- Metra
- Norfolk Southern Railway Company (NS)
- Union Pacific Railroad Company (UP)

Other Railroad Participants:

- Belt Railway Company of Chicago (BRC)
- Indiana Harbor Belt Railroad Company (IHB)

- *CREATE East-West Corridor Project 2 (EW2)* –This project would reduce congestion and delays in the 75th Street corridor between the Dan Ryan Expressway (I-94) southeast of 80th Street Junction, and Ashburn Junction near Columbus Avenue and 81st Street to the southwest.
- *CREATE Passenger Corridor Project 2 (P2)* – This project would reduce rail conflicts for Metra operations by constructing a flyover bridge to connect the Metra SouthWest Service (SWS) Line to the Rock Island District (RID) Line.

Footnotes are listed at the end of this section

- *CREATE Passenger Corridor Project 3 (P3)* – This project would eliminate conflicts at Forest Hill Junction (75th Street between Damen Avenue and Western Avenue) between the Metra SWS and the north-south CSX tracks through the construction of a rail-rail flyover.
- *CREATE Grade Separation Project 19 (GS19)* – This project proposes to grade-separate 71st Street and the north-south CSX tracks.

This study has been developed following IDOT's Context-Sensitive Solutions (CSS) process, using extensive public outreach through all phases of the study.

2. Purpose of and Need for the Action

CREATE Program

The Chicago region is the busiest rail freight gateway in the United States, handling more than 37,500 rail freight cars each day. By 2023, that number is expected to increase by nearly 80% to 67,000 cars per day.[2] However, approximately 14% of freight train operation hours within the CREATE Program area currently consist entirely of delay time due to rail congestion and conflicts with other trains.[3] These delays will continue to worsen without significant investment in rail infrastructure. It is a stated objective of the CREATE Program to expedite the movement of freight trains through chronically congested areas of the Chicago region.

Passenger rail ridership in the Chicago region has also been steadily increasing. Metra commuter rail ridership has increased by an average of 1.38% per year since 1983 and Amtrak ridership is also near record highs in Illinois and nationwide. Passenger and freight schedules are coordinated to minimize delays for rail passengers. However, this means freight trains often have to stand aside during Metra's peak service periods, which increases delays or limits routing options for freight. Even with these steps to coordinate the schedules, Amtrak trains operating to the south and east experience an average of over nine hours of delay per day within the Chicago area. Because the rail network is already congested, delays to any train can cause a cascading effect that delays other trains throughout the rail system.

In addition to the rail system, over 100,000 vehicles per day are delayed at the 164 highway-rail grade crossings in the region located within the CREATE Program corridors. The combined total average of these delays is over 3,600 hours per day. Each grade crossing also presents a potential safety hazard, with a predicted total of approximately eight collisions occurring at grade crossings in the CREATE Program area annually.[4] Based on coordination with the City of Chicago and data from the Illinois Commerce Commission and the US Department of Transportation, the CREATE Program has proposed 25 critical grade crossings for grade separation.[5] Another objective of the CREATE Program to increase the safety of grade crossings within the Chicago region.

75th Street Corridor Improvement Project

Like the CREATE Program as a whole, the purpose of the 75th Street CIP is to improve mobility for rail passengers, freight, and roadway users. The specific needs for this project include:

- *Reduce Rail-Rail Conflicts*

  There are three major rail-rail conflicts in the study area: Forest Hill Junction, Belt Junction, and 80th Street Junction (Figure S-1). Since many of the desired train movements through these junctions must cross paths, often only one train can pass through each of these crossings at any given time. The crossings thus become choke points, causing long delays for many trains attempting to pass through the study area and potentially affecting train operations throughout the entire Chicago region. The distances between these junctions are also shorter than modern train lengths. This requires trains to wait outside of all the junctions until the junctions are all cleared of other rail traffic before starting.

  Metra SWS commuter trains pass through both Forest Hill Junction and Belt Junction, causing the freight railroads (BRC, CSX, NS, and UP) to suspend operations through these areas for approximately three hours during both the morning and evening peak commuting hours. By allowing Metra relatively full use of the corridor for essentially six hours of each day, the actual daily freight capacity of the entire corridor is substantially reduced during these periods.

  There are additional conflicts north of the study area between Metra SWS trains, Amtrak trains, and freight trains on the Norfolk Southern's Chicago and Western Indiana (CWI) line. In most instances, the freight operations are delayed to allow passenger trains to pass; however, there are also delays to Metra and Amtrak along the CWI line while the passenger trains wait for the crossings along the line to clear.

- *Reduce Highway-Rail Crossing Problems*

  Highway-rail grade crossings create delays for roadway users – including motorists, pedestrians, and emergency responders – and increase the risk of crashes. The 75th Street CIP study area includes the grade crossing at 2200 W 71st Street in Chicago, where the roadway crosses four north-south CSX rail tracks. Observations by the project team showed that the gates can be down for over four hours of a typical day at this location, causing over 350 total vehicle-hours of delay to drivers every day. In addition, the number of crashes at the 71st Street crossing over the past 25 years is seven times the Cook County average.

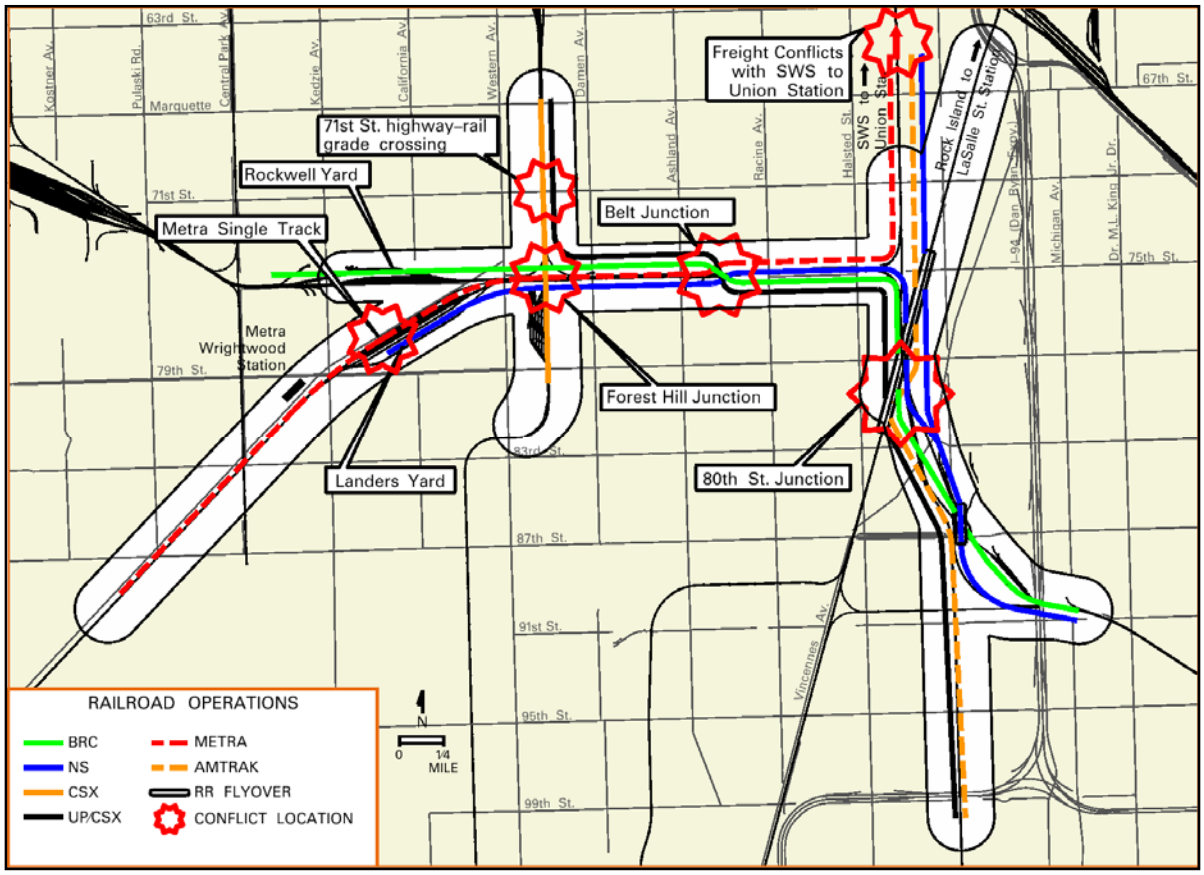

Figure S-1: 75th Street CIP Conflict Map

- *Reduce Local Mobility Problems*

  The rail lines in the study area also act as a barrier to vehicular, bicycle, and pedestrian transportation. Within the approximately 14 miles of rail corridor encompassed by the 75th Street CIP, there are seven stretches of more than a half-mile where there are no crossings of the rail corridor. In other locations, crossing may be possible, but certain viaduct conditions make crossing unappealing and unsafe, particularly for bicyclists and pedestrians. Issues raised by local residents, the two Community Advisory Groups, and elected officials included poor visibility due to inadequate or inoperative lighting, poorly maintained vegetation, poor drainage for bridge structures and roadways, crumbling and falling concrete from bridges, and poor roadway pavement and sidewalk conditions.

- *Improve Rail Transit Passenger Service Reliability*

  Reliability of Metra SWS and Amtrak trains are affected by the rail crossings at Forest Hill Junction, Belt Junction, 80th Street Junction, and the conflict points on the CWI line. Additionally, the Metra SWS Line currently operates on a single track from Ashburn Junction, southwest of Wrightwood Station, to just east of Western Avenue (2400 W). This does not allow Metra trains to operate in both directions at the same time through the single-track section,

so one opposing train must idle at either end of the single track section waiting for clearance. Trains are generally scheduled to avoid this issue, but if one train is delayed it can cause a train in the opposite direction to wait until the oncoming train has cleared the single track section.

Purpose and Need statement for the 75th Street Corridor Improvement Project:

- Reduce rail-rail conflicts
- Reduce highway-rail crossing problems
- Reduce local mobility problems
- Improve rail transit passenger service reliability

3. Alternatives

The alternatives for detailed evaluation in this study were developed through the following general steps:

- Dividing the 75th Street CIP study area into several "improvement areas" based on geography and the ability to meet certain project needs.
- Developing a range of "preliminary alternates" to address the components of the project's Purpose and Need statement within each of the "improvement areas".
- Screening preliminary alternates using both qualitative and quantitative criteria to select the most effective alternates.
- Combining the remaining alternates that passed the screening process from each of the improvement areas into an overall "Build Alternative" for the entire project corridor.
- Defining a "No-Build Alternative" to serve as a baseline for evaluating the Build Alternative.

Improvement Areas

The five unique "improvement areas" described below and shown in Figure S-3 are the general locations where solutions to address the various components of the Purpose and Need statement would be focused:

- *Forest Hill Junction/71st Street* – Two north-south CSX railroad tracks currently cross four east-west tracks at Forest Hill Junction, creating delays for freight and passenger rail. One half-mile north of Forest Hill Junction, the CSX tracks cross 71st Street at-grade. The two issues are linked because the option selected at Forest Hill Junction affects what is feasible at 71st Street.

Alternates in this area address rail line at-grade conflicts at Forest Hill Junction (see Figure S-2), highway-rail crossing problems at 71st Street, and rail transit passenger service reliability issues for the Metra SWS Line.

Figure S-2: Forest Hill Junction

80th Street Junction – Amtrak, BRC, CSX, NS, and UP rail operations all must traverse the 80th Street Junction interlocking, with many required crossing maneuvers. The reduced number of tracks through the junction and the arrangement of the tracks make it impossible in most cases for more than one train to move through the junction at a time. Alternates in this area address rail line at-grade conflicts at 80th Street Junction and Belt Junction, and rail transit passenger service reliability issues for the Amtrak *Cardinal/Hoosier State* route.

- *Metra Rock Island District (RID) Line Connection* – Metra SWS trains currently travel east and west through the 75th Street corridor, connecting to the CWI line to Union Station in downtown Chicago. The trains must cross the BRC, CSX, and UP freight movements at Belt Junction and face additional rail conflicts and delays as they travel north along the CWI line.

  Alternates in this area would re-route Metra SWS trains to LaSalle Street Station in downtown Chicago via the RID Line, which has very limited freight traffic from Class I railroads. This would address rail line at-grade conflicts at Belt Junction and along the CWI line, and rail transit passenger service reliability issues for both the Metra SWS Line and the Amtrak *Cardinal/Hoosier State* route.

- *Metra along Columbus Avenue* – Metra currently operates on a single track for 2.0 miles between the Ashburn Interlocking (north of 83rd Street) to approximately Western Avenue, generally parallel to Columbus Avenue. This sometimes requires trains traveling one direction to wait on a train traveling the opposite direction to clear the area before continuing, thus creating delays. Alternates in this area would add a second track to address rail transit passenger service reliability issues for the Metra SWS Line and reconfigure the NS Landers Yard to provide room for the second Metra track.

- *Belt Junction* – The number of tracks in the 75th Street corridor is reduced from five to two at Belt Junction, with most trains required to cross from the south side of the corridor to the north side of the corridor or vice versa. This generally means that only one train can pass through the corridor at a time. The combination of alternates at 80th Street Junction and the RID Line Connection would eliminate all crossing conflicts at Belt Junction.

Figure S-3 shows the general locations of these five improvement areas. Additionally, improvements to *local mobility* were identified as a specific project need through the stakeholder involvement process. Improvements to address this project need would be focused not in one specific location or area, but rather at railroad viaduct locations throughout the study area.

Alternate Development and Screening

Preliminary alternates were developed within each improvement area with the primary goal of meeting the specific elements of the project's Purpose and Need statement. Alternates that did not adequately address some element of the project Purpose and Need statement were eliminated from consideration. Other criteria used in the screening process included:

- The degree to which the alternate would improve railroad operations through the corridor.
- The amount and nature of new right-of-way acquisition that would be required.
- The planning-level construction cost of the alternate.
- The degree to which the alternate met railroad and roadway design criteria.
- Other identified impacts (positive or negative) of the specific alternate.

Forest Hill Junction / 71st Street Area

Three alternates were developed for the Forest Hill Junction/71st Street improvement area:

- *Alternate FH-1* would raise two east-west Metra tracks over the two north-south CSX tracks at Forest Hill Junction. Freight conflicts between trains on the CSX line and the remaining east-west BRC and NS tracks would remain. A roadway bridge would carry 71st Street over the CSX tracks, requiring the acquisition of approximately 48 single family homes and one auto-service business. Access to 71st Street would be eliminated from Bell Avenue and Hamilton Avenue, with cul-de-sacs constructed at those locations. This alternate would partially meet the Purpose and Need by reducing some rail-rail conflicts, by eliminating the 71st Street highway-rail grade crossing, and by improving passenger service reliability.
- *Alternate FH-2* would raise the two north-south CSX tracks over the four east-west tracks at Forest Hill Junction *and* over 71st Street. Two temporary tracks would be constructed east of the existing CSX tracks (primarily on property currently owned by the City of Chicago) while the new structure is being constructed. All rail conflicts would be eliminated at Forest Hill Junction, and no new private right–of-way would be required. This alternate would result in temporary noise impacts during construction as well as visual impacts from the new rail flyover. This alternate would fully meet the Purpose and Need by eliminating rail-rail conflicts, by eliminating the 71st Street highway-rail grade crossing, and by improving passenger service reliability.
- *Alternate FH-3* would raise five east-west tracks over the two CSX tracks at Forest Hill Junction and construct a bridge for 71st Street over the CSX tracks. This would eliminate all freight conflicts at Forest Hill Junction, but would also remove access to the BRC's Rockwell Yard and

the NS's Landers Yard from the east. Impacts at 71st Street would be the same as for Alternate FH-1. In addition to the impacts to rail operations and property along 71st Street, the structure would be more expensive than those in Alternates FH-1 and FH-2 due to its greater width. This alternate would fully meet the Purpose and Need by eliminating rail-rail conflicts, by eliminating the 71st Street highway-rail grade crossing, and by improving passenger service reliability.

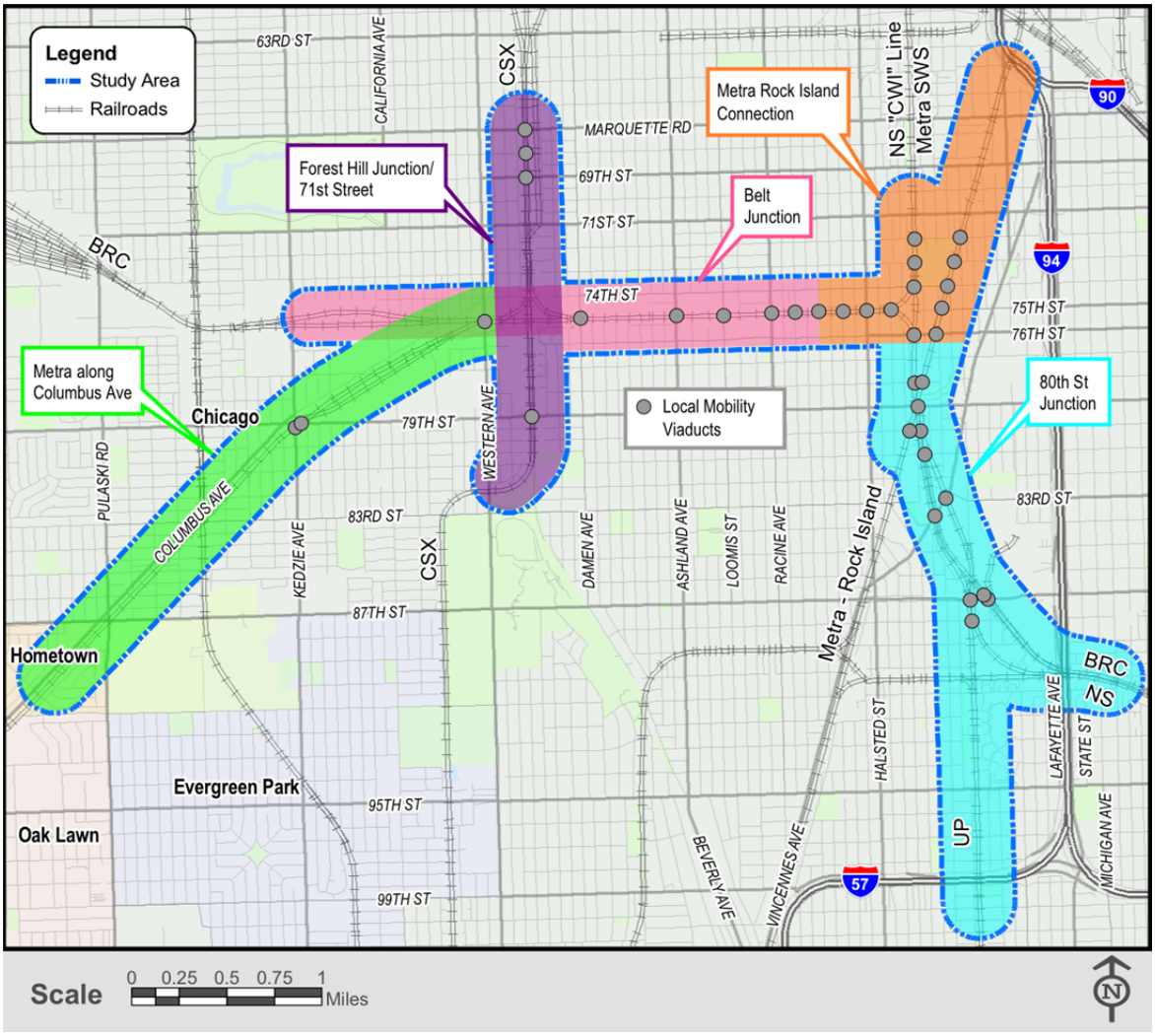

Figure S-3: Improvement Areas Map

Alternate FH-2 was advanced for further evaluation in this improvement area. It would be similar in cost to Alternate FH-1, but eliminates all rail conflicts at Forest Hill Junction and does not require property acquisition at 71st Street.

80th Street Junction

Alternates to improve rail operations in this area are focused in the north-south rail corridor between approximately 91st Street and 79th Street, but some alternates may include improvements and track additions as far west as Landers Yard. The two alternates for the 80th Street Junction area are:

- *Alternate 80-1* provides two additional through tracks and reconfigures the 80th Street interlocking (i.e., train switches and signals). This would include a new NS track from 77th Street north and west to Landers Yard (between Western Avenue and Kedzie Avenue). The added tracks would improve capacity and allow more than one train to pass through the junction. There would be no adverse impacts associated with this alternate, but it would not meet the Purpose and Need because the existing crossing conflicts between the BRC, NS, and UP would remain essentially unchanged.
- *Alternate 80-2* would also provide two additional through tracks through 80th Street Junction, but would eliminate crossing conflicts by relocating Amtrak, CSX, and UP operations from the west side of the corridor to the east side of the corridor. This would be accomplished by using unused space on an existing NS bridge over the BRC tracks north of 87th Street. A new bridge would also be constructed for the UP over 88th Street, and a new NS track would be constructed from approximately the Dan Ryan Expressway (I-94) north and west to Landers Yard. Vacant industrial land between the two sets of railroad tracks north of Vincennes Avenue and south of 81st Street would need to be acquired for this alternate, but no residences would be relocated. This alternate would fully meet the Purpose and Need by eliminating rail-rail conflicts and improving passenger service reliability.

Alternate 80-2 was advanced for further evaluation because it meets the Purpose and Need by eliminating all freight crossing conflicts at both 80th Street Junction and at Belt Junction. Alternate 80-1 adds additional track capacity through the 80th Street Junction, but does not eliminate all the crossing conflicts.

Metra SWS Connection to Rock Island District Line

Several potential corridors were considered for the proposed Metra SWS connection to the RID Line (see Figure S-4). All the corridors would meet the Purpose and Need by eliminating rail-rail conflicts and improving passenger service reliability. The corridors considered were:

- *Tunnel under Hamilton Park* – This alternate would move Metra from its existing elevation on embankment above the roadways to one beneath the existing street network. This would require a minimum 45-foot change in elevation assuming a cut-and-cover method of construction, requiring a distance of nearly half a mile for Metra trains to transition from the existing elevation to a tunnel or vice versa. All streets crossing the Metra tracks over this distance would be blocked by the tunnel structure, thus impacting local mobility, community cohesion, emergency response, and transit services. Along the 75th Street corridor, impacted streets could include Union Avenue, Halsted Street, and Peoria Street. Returning from the tunnel up to the elevation

of the RID Line would close 71st Street, 72nd Street, and the 73rd Street pedestrian underpass to Hamilton Park.

The cut-and-cover construction method would also require the demolition of all buildings in the path of the tunnel. A bored tunnel could preserve the buildings, but would require increased depth and transition lengths, thus requiring additional street closures (e.g., Morgan Street and 70th Street). Construction of a tunnel of over a mile in length would also cost substantially more than any of the above-ground options. The tunnel alternate was therefore dropped from further consideration due to the combination of impacts and costs.

- *Overhead Structure Through Hamilton Park* – To minimize impacts to the residential neighborhoods north or south of the park, it would be physically possible to construct a bridge structure *through* Hamilton Park. However, Hamilton Park is an important community resource that is listed on the National Register of Historic Places. As a publically-owned park and historic site, Hamilton Park is protected by Section 4(f) of the 1966 Department of Transportation Act, which prohibits the use of public park lands or historic sites for transportation projects unless it can be shown that there are no prudent and feasible alternatives, or it is determined that the impacts are minimal. Since other feasible alternates are available, the "Through Hamilton Park" alternates were dropped from further consideration
- *Overhead Structure North of Hamilton Park* – For this group of alternates, inbound Metra SWS trains would run along the west side of Hamilton Park, turn east near 72nd Street, and connect to the Metra RID Line near 69th Street. The track would be on a new structure for almost the entire distance from Peoria Street to the RID tracks, making it nearly three times longer than a connection south of the park, thus resulting in greater noise, visual, property, and cost impacts than the alternates south of Hamilton Park. Approximately 60 properties would have to be acquired in the neighborhood north of the park. Due to the greater impacts than the "South of Hamilton Park" alternates and higher costs without additional benefits, the "North of Hamilton Park" alternates were dropped from further consideration.
- *Overhead Structure South of Hamilton Park* – The shortest distance between the Metra SWS Line and the RID Line is through the area south of Hamilton Park. The alternate alignments in this corridor would construct a new bridge for the Metra SWS Line above the BRC tracks near Union Avenue, continue east in the 75th Street Corridor, and turn north between Parnell Avenue and Normal Avenue to connect to the RID Line near 74th Street. This option would result in the shortest possible length of new overhead rail structure, thus minimizing the noise, visual, property, and cost impacts compared to any of the "Overhead Structure" alternates. Approximately 23 properties, containing 16 residential structures, 1 institutional facility, and 6 vacant parcels would be acquired.

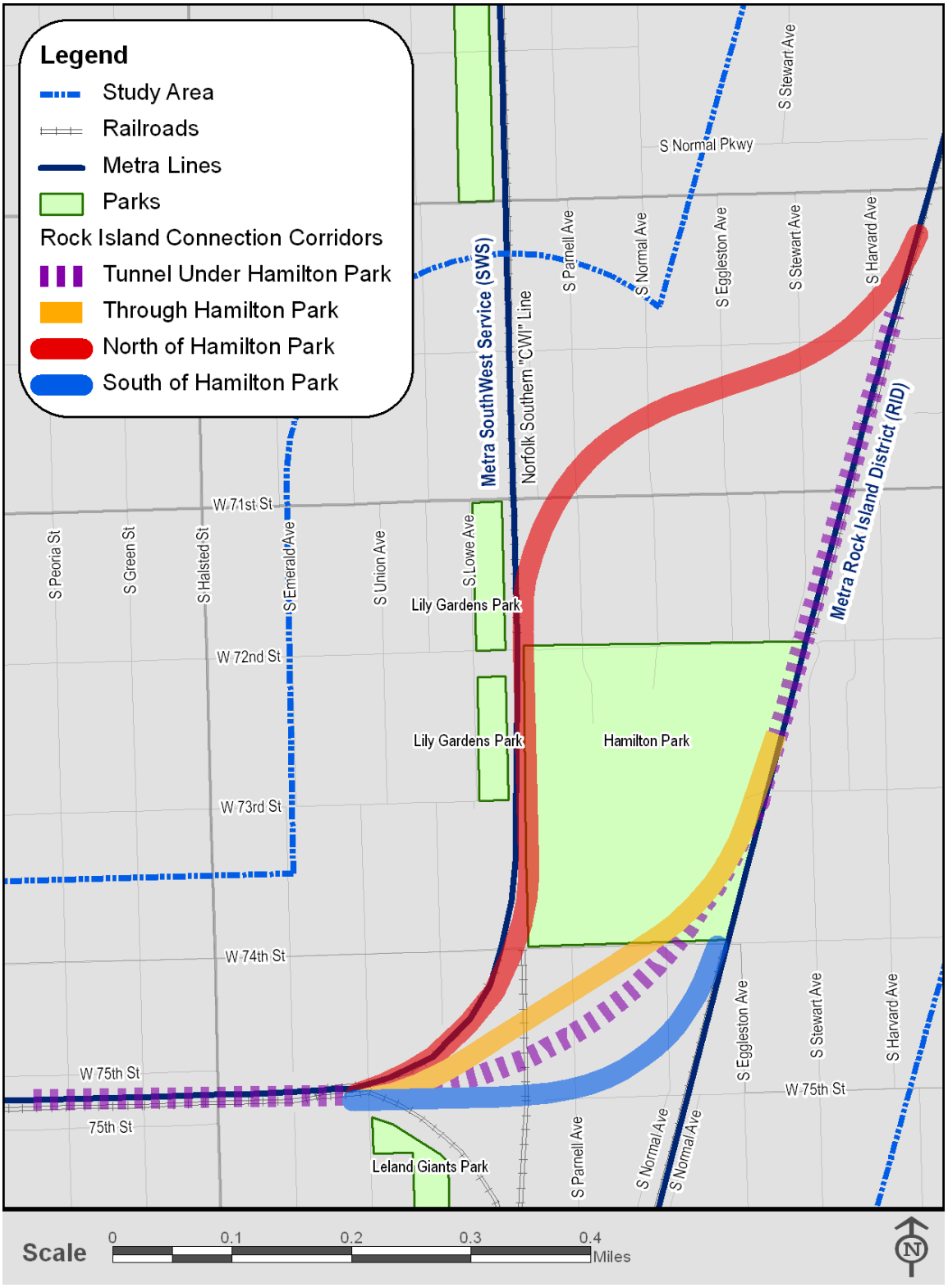

Figure S-4: Metra Rock Island District Connection Corridor Locations

Several detailed alignments were developed in the **South of Hamilton Park** corridor (see Figure S-5). These alternates are described as follows:

- *Alternate RI-1* – Metra flyover bridge on 40 MPH reverse curve, connecting to the RID Line at 74th Street. This alternate was designed as the most direct connection to the RID Line that would meet Metra design criteria and not require taking property from Hamilton Park
- *Alternate RI-2* – Metra flyover bridge on 36 MPH curve, connecting to the RID Line at 74th Street. This alternate was developed as a modification of Alternate RI-1 that would avoid taking the church property at 7500 S. Parnell.
- *Alternate RI-3* – Metra flyover bridge on 40 MPH curve, connecting to RID north of 74th Street. This alternate was designed to minimize the taking of residential properties to the greatest extent possible, but would acquire a very small portion (0.03 acres) of Hamilton Park.

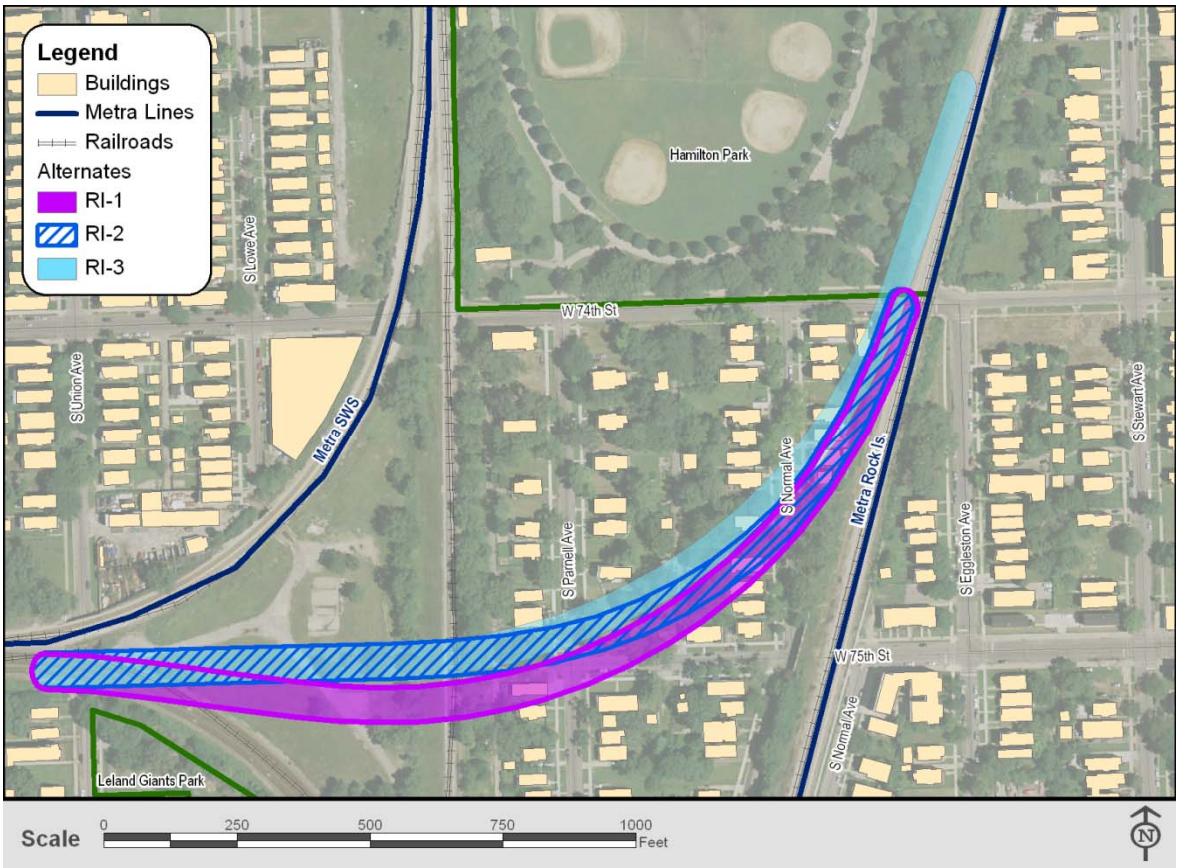

Figure S-5: Alternates RI-1, RI-2, and RI-3, Metra Rock Island District Connection

The number of buildings impacted, parcels to be acquired, number of dwelling units remaining adjacent to the new structure, and amount of Hamilton Park land to be acquired varies slightly for each alternate as shown in Table S-1. These impacts are discussed in more detail in Section 2.2.4.3.

Table S-1: Screening Evaluation Matrix – South of Hamilton Park Alternates

Evaluation Category (Unit of Measurement)		Metra Rock Island District Connection Alignment Alternates South of Hamilton Park		
		RI-1	RI-2	RI-3
Design	Design Speed (MPH)	40	36	40
	Meets Metra Design Criteria	Yes	No	Yes
	New Embankment Required (ft)	251	251	283
	New Structure Required (ft)	1,332	1,291	1,410
Impacts	Total New ROW Acquired (acres)	2.56	2.61	2.65
	Park Land to be Acquired (acres)	0	0	0.032
	Temporary Construction Permit in Hamilton Park	Yes	Yes	Yes
	ROW Taking from National Register Listed Property (i.e., Hamilton Park)	No	No	Yes
	Dwelling Units to be Acquired	27	26	21
	Parcels to Remain Adjacent to New Structure	3	3	4
	Dwelling Units to Remain Adjacent to New Structure	0	7	8
	Church to be Acquired	1	0	0
	Possible Public Road Closure (Union Ave)	1	1	1

Alternate RI-1 was ultimately advanced for further evaluation. This decision was based on the ability to meet Metra design criteria, the lack of property impacts to Hamilton Park, strong community support, and fewer residential dwelling units remaining directly adjacent to the property to be acquired. (During the public involvement process, many stakeholders said that they would view living immediately adjacent to a new rail line very negatively due to concerns about the threat of derailments and the noise and vibration of regular train pass-bys.) Of the 40 comments about the Metra RID Connection at the Range of Alternatives public meeting on October 27, 2011, 70% supported Alternate RI-1.

Metra along Columbus Avenue

Two alternates were considered in this area to add a second track for Metra along Columbus Avenue. Both would add a second mainline track from the Ashburn Interlocking north of 83rd Street to Western Avenue and both would fully meet the Purpose and Need by improving rail transit passenger service reliability. The alternates differ in the location of the proposed track in the vicinity of Landers Yard:

Alternate CA-1 would add a second mainline track on the northwest side of the existing Metra track, moving Metra trains as close as 13 feet from the existing roadway edge-of-pavement along Columbus

Avenue. This design, which would not be in conformance with Metra standards, raised several concerns related to safety and maintenance. These concerns included the potential for errant vehicles to leave the roadway and enter the railroad tracks, limited visibility for drivers due to oncoming train headlights, and limited space available for roadway or rail maintenance without land closures on Columbus Avenue.

Alternate CA-2 would add a second mainline track southeast of the existing Metra track, through the existing NS Landers Yard. This alternate would require reconfiguring tracks in Landers Yard, which would be more expensive than Alternate CA-1, but would maintain the existing horizontal clearance from the roadway, thus alleviating the safety and maintenance concerns associated with Alternate CA-1.

Alternate CA-2 was advanced for further evaluation due principally to the safety and maintenance concerns associated with moving the track closer to Columbus Avenue in Alternate CA-1.

Belt Junction

The freight conflicts at both Belt Junction and 80th Street Junction would be eliminated by track realignment included in Alternate 80-2. The conflicts between Metra SWS trains and freight traffic at Belt Junction are eliminated by elevating the two Metra tracks over the BRC and NS tracks as part of the connection to the Metra RID Line. Thus, the rail line at-grade conflicts and passenger service reliability issues at Belt Junction are entirely addressed by alternates in other improvement areas.

Local Mobility

The study area includes 48 locations where railroad bridges cross over roadways or pedestrian passages. Residents of the community consistently identified several safety issues with viaducts that negatively impact local mobility within the study area. These issues include low visibility due to lighting conditions, poor drainage, crumbling concrete, and poor pavement conditions on roadways and sidewalks. A total of 37 viaduct locations (see locations in Figure S-6) were surveyed to document these deficiencies.

Two alternates were developed to address the deficiencies at the viaducts that are eligible for inclusion in the project:

- *Alternate LM*-1 – This alternate would fully meet the Purpose and Need by correcting the identified local mobility deficiencies at 36 surveyed viaducts within the study area. Union Avenue, the remaining surveyed viaduct, would be permanently closed. The scope of work is based on meeting current policy standards (e.g., for lighting systems or ADA ramps) or a minimum performance standard (e.g., for roadway pavement, sidewalks, and drainage).
- *Alternate LM*-2 – This option would be less-comprehensive, partially meeting the Purpose & Need by correcting the identified local mobility deficiencies only at those viaducts which would require substantial structural work associated with the track improvements making up the Build

Alternative. Substantial structural work is anticipated at 11 of the 37 viaduct locations, as shown in Figure S-6. Other sources of funding would be required to complete work at the other 26 locations.

The local community identified impediments to local mobility caused by the conditions at the viaducts as a primary issue to address in the project. Correcting the deficiencies at the viaducts would provide direct positive benefits to the communities in which the railroads operate. Based on these considerations, **Alternate LM-1** was recommended to advance for further evaluation.

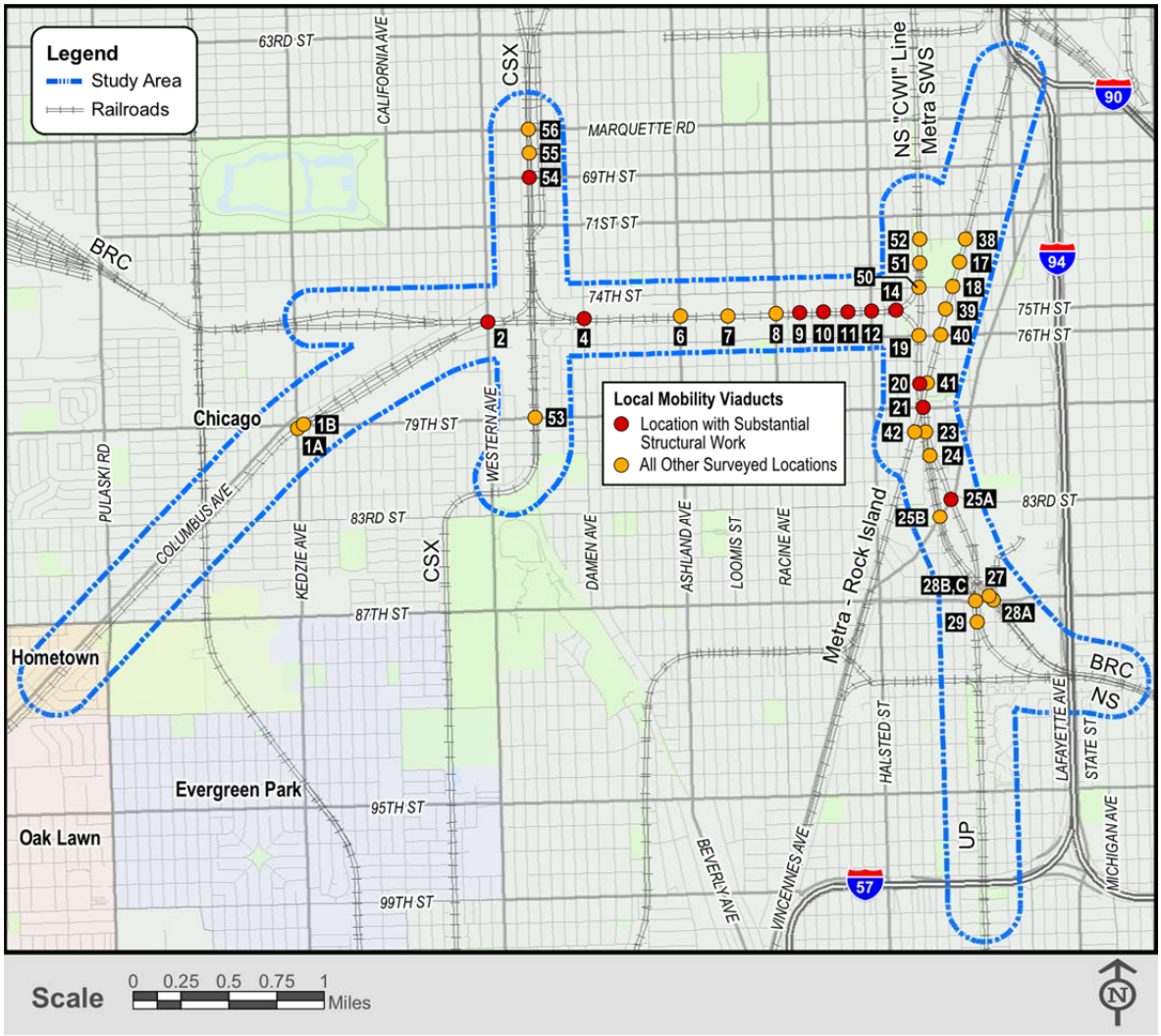

Figure S-6: Viaducts Included in Local Mobility Study

Evaluation of the Build and No-Build Alternatives

As described above, one alternate from each improvement area was advanced for more detailed evaluation. These alternates were combined into a single Build Alternative as shown in Figure S-7.

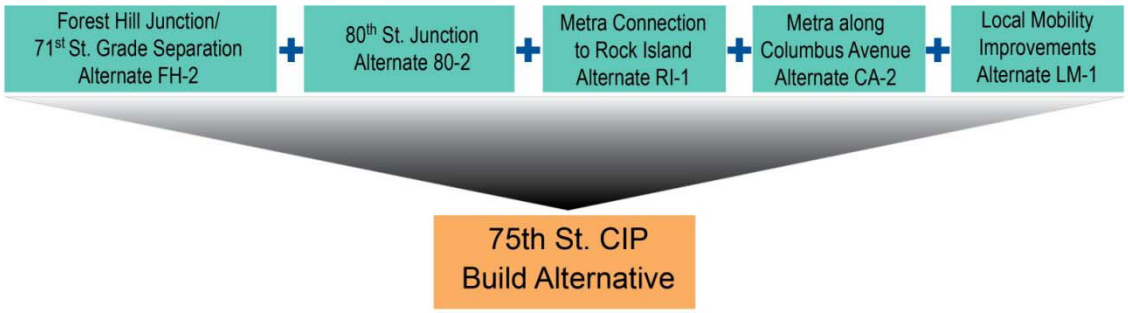

Figure S-7: Composition of the Build Alternative

The Build Alternative would meet all major elements of the project's Purpose and Need statement:

- Eliminate rail line at-grade conflicts at Forest Hill Junction, Belt Junction, and 80th Street Junction;
- Reduce rail conflicts along the CWI line;
- Eliminate highway-rail crossing problems at 71st Street;
- Reduce local mobility problems at 36 viaducts in the project area; and
- Improve rail transit passenger service reliability by providing a second Metra track along Columbus Avenue and by eliminating the rail line at-grade conflicts at existing junctions within the study area.

The No-Build Alternative would not provide any improved rail or roadway facilities and would therefore not address any elements of the project Purpose and Need statement. Existing safety and transportation efficiency problems related to these project needs would only worsen over time as rail transportation demand through the corridor continues to grow. Rail traffic projections indicate that the 75th Street corridor only has capacity to allow rail freight traffic to increase up to the year 2024, at which point no additional growth in train traffic could be accommodated.

By eliminating rail conflict points and providing additional through tracks, the Build Alternative would allow considerably more rail freight traffic through the project corridor than would be possible with the No-Build Alternative.

Table S-2 shows projected freight volumes in the Build and No-Build Alternatives for the design year of 2029. The Build Alternative would allow the corridor to accommodate 21% more freight trains and

23% more freight cars per day through the study area than the No-Build Alternative. As shown in Table S-3 projected freight and passenger rail travel times through the corridor would also decrease with implementation of the Build Alternative.

Table S-2: Rail Freight Traffic through the Study Area

Route	Existing 2009	No-Build Alternative 2029	No-Build Increase Over Existing	Build Alternative 2029	Build Alternative Increase Over No-Build
Average Daily Freight Train Trips Through the Study Area, All Lines	84	124	48%	150	21%
Annual Freight Cars Through the Study Area, All Lines	1,918,440	3,412,257	78%	4,184,456	23%

Source: CTCO Train Model Output, May 27, 2011.

Table S-3: Average Travel Time through the Study Area

Route	Map Nodes[a]	Existing 2009 (min:sec)	No-Build 2029 (min:sec)	Build 2029 (min:sec)	% Improvement Over No-Build
Freight					
Rockwell Yard to 95th St.	B to I	25:58	30:33	19:21	37%
Rockwell Yard to Dan Ryan	B to L	44:15	39:14	22:06	44%
Columbus Ave. to Dan Ryan	A to L	43:13	57:42	32:33	44%
79th St. to Marquette Rd. through Forest Hill Jct.	C to D	33:32	45:38	08:24	82%
Passenger (Metra SWS)					
Columbus Ave to N. of 69th St.	A to F/N	12:24	12:36	10:16	18%

[a]Map Nodes for this route are shown on Figure S-8.

Source: CTCO Train Model Output, May 27, 2011.

The Build Alternative would eliminate one of the major highway-rail grade crossings in the study area at the 71st Street crossing of the CSX tracks. The No-Build Alternative would make no change at the 71st Street grade crossing, and vehicle delay would increase over time from today's level due to both an increasing number of trains passing through the crossing and increasing vehicular traffic on 71st Street. The risk of further crashes at this crossing would also grow as the traffic through the crossing grows. The No-Build Alternative would not meet the purpose and need of the project.

The Build Alternative would make improvements at 36 viaducts within the study area. This work would improve mobility for vehicles, bicyclists, and pedestrians and make travel within the study area

safer and more inviting. With the No-Build Alternative, there would be no program of improvements to the viaducts across the study area. Any repairs and upgrades would be handled through the City of Chicago's current viaduct improvement program, as funding became available. Repairs or reconstruction of the rail bridges would be accomplished by the railroads only as the needs arise and the required construction funds are identified.

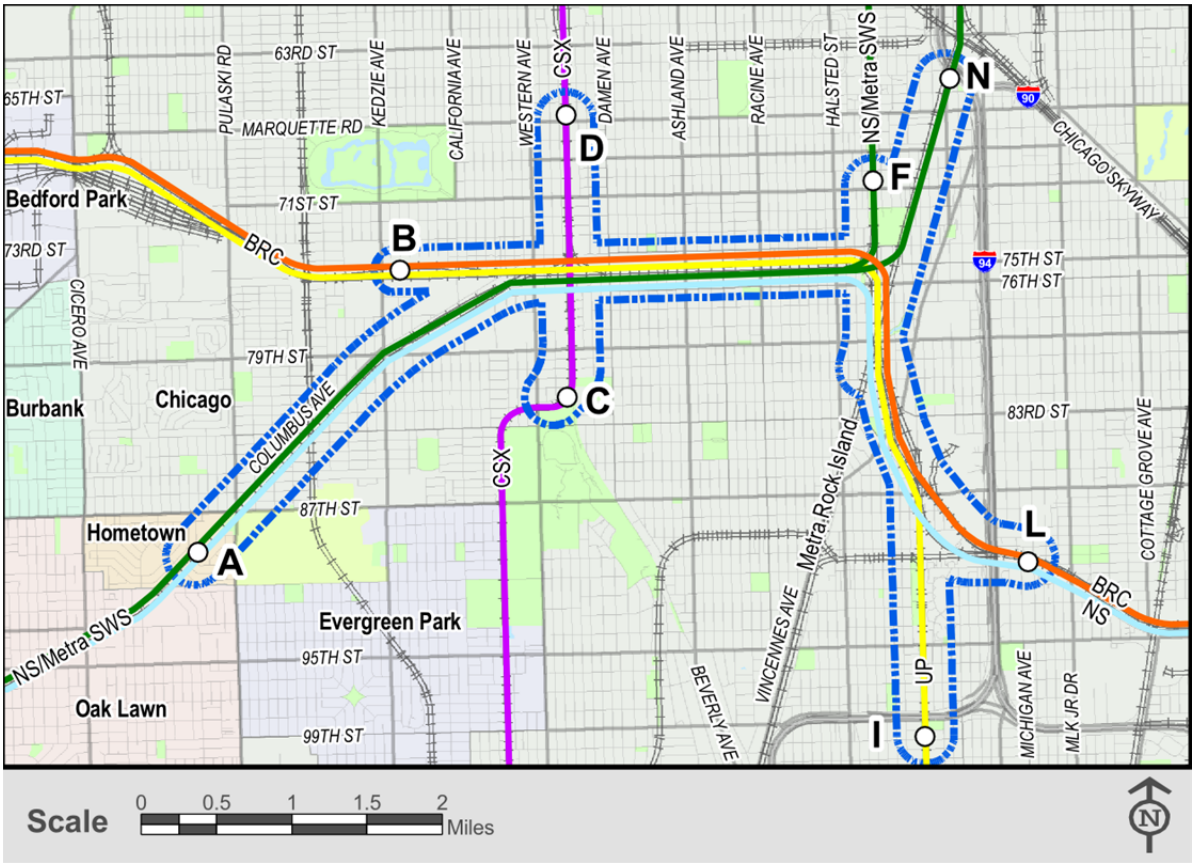

Figure S-8: Routes for Typical Rail Travel Time Analysis

Recommendation of the Preferred Alternative

As discussed above, the Build Alternative fully meets all of the elements of the project's Purpose and Need statement by improving rail system performance, eliminating the highway-rail grade crossing at 71st Street, and improving local mobility at viaducts in the study area. The No-Build Alternative fails to address any of these issues.

In addition, the Build Alternative has been developed and validated through an extensive stakeholder involvement program including meetings with the general public, Community Advisory Groups (CAGs), and stakeholders such as the Chicago Park District. The key stakeholders concurred with the recommendations in the Build Alternative.

Based on the analysis presented in this document, the stakeholder input provided throughout the study process, and the concurrences from the stakeholders described above, **the Build Alternative has been recommended as the Preferred Alternative.** A joint meeting of the CAGs was held on January 12, 2012 and the Preferred Alternative was presented for comments and further input. The CAGs expressed no objections to the recommended Preferred Alternative.

Description of the Preferred Alternative

The principal features of the Preferred Alternative are shown in Figure S-9 and summarized in the following paragraphs.

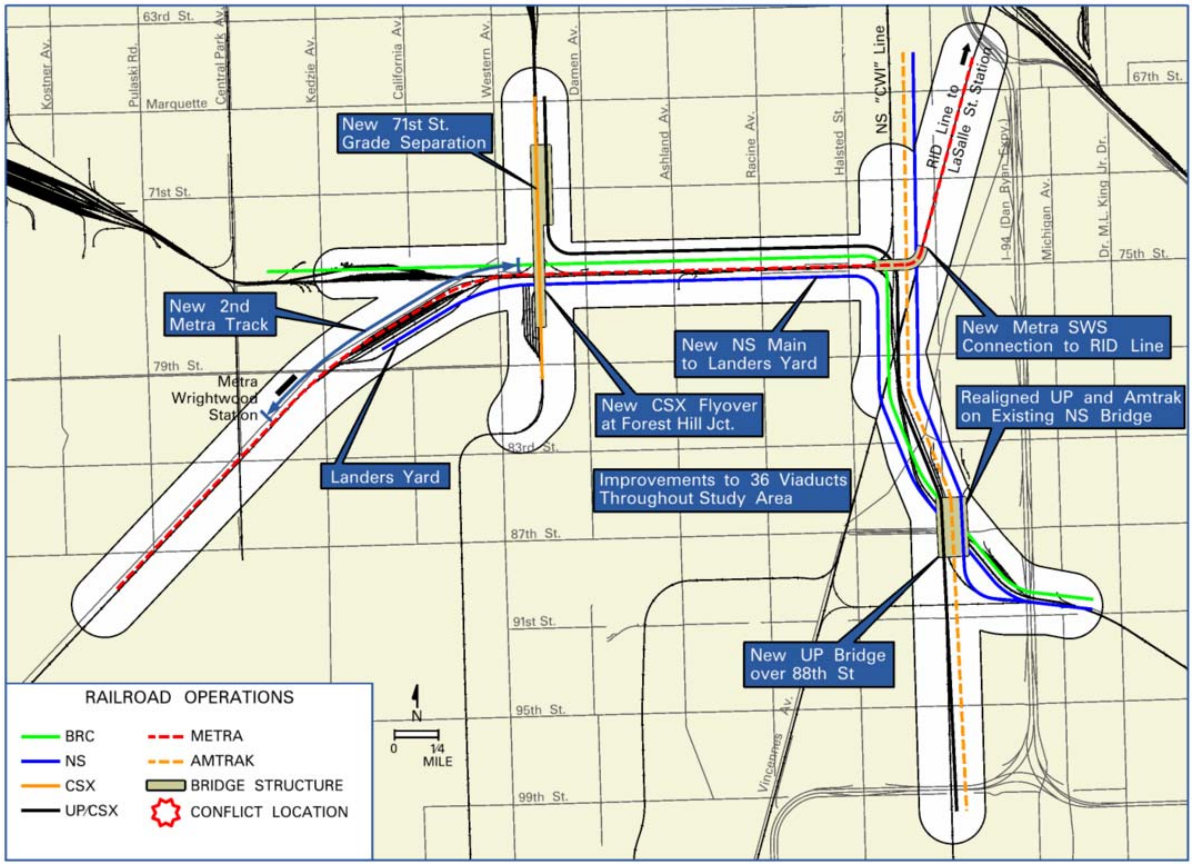

Figure S-9: 75th Street CIP Preferred Alternative Schematic

At Forest Hill Junction, the Preferred Alternative would provide a new double-track elevated structure to carry the CSX mainline track over the existing at-grade rail crossing and over the existing highway-rail grade crossing at 71st Street, thus eliminating all conflicts associated with these crossings. No new right-of-way would be acquired for these improvements, which would all be constructed on current railroad or City of Chicago property.

At 80th Street Junction, the Preferred Alternative would realign existing tracks and provide additional new tracks, including a new NS mainline track from the southeast portion of the study area to Landers Yard, to eliminate rail conflicts at both 80th Street Junction and Belt Junction. Approximately 9.5 acres of vacant industrial land bounded by the existing NS tracks, BRC tracks, 81st Street, and Vincennes Avenue would be acquired to construct two new UP tracks. Additionally, a 3.3-acre portion of a parcel of vacant land south of Vincennes Avenue would need to be acquired to accommodate additional tracks and service roads.

The Preferred Alternative would provide a new double-track flyover connection for the Metra SWS from the existing tracks in the 75th Street corridor to the existing RID Line tracks. The new connection would be located entirely on structure through the residential neighborhood immediately south of Hamilton Park. Twenty parcels totaling approximately 2.3 acres and including 23 dwelling units and one institutional facility would be acquired in this area. Union Avenue would be closed at the 75th Street rail embankment and cul-de-sacs would be constructed on either side. Four dwelling units on three parcels totaling 0.3 acres would be acquired on Union Avenue and Emerald Avenue in the vicinity of this closure.

Along Columbus Avenue, the Preferred Alternative would provide a new second through track for Metra along the west side of Landers Yard and through the Wrightwood Station. Tracks in Landers Yard would need to be relocated to provide room for the new Metra track. No new right-of-way would be required.

The Preferred Alternative would improve 36 viaducts within the study area. Improvements would include roadway resurfacing at 8 locations and roadway reconstruction at 8 locations; reconstruction of sidewalks at 13 locations and addition of 90 accessible sidewalk ramps; replacement of complete lighting systems at all 36 locations; reconstruction of drainage systems at 19 locations; and waterproofing of 13 bridge decks, reconstruction of 7 bridge abutments, and reconstruction of underdrains at 4 bridge locations. No new right-of-way would be required for the viaduct improvements.

Construction of the project would likely be conducted in several phases to better accommodate day to day rail operations through the corridor and to match the likely availability of funding. With a continuous, adequate stream of funding for the project, construction could begin in 2017 and be completed by the close of 2021. Any shortfalls or delays in funding could result in breaks between the separate phases of construction; which could extend over a period of years in the worst case, thus extending the date for overall project completion further into the future. At the present time, there is no funding committed for right-of-way acquisition or construction of this project. The total year of expenditure (YOE) cost for the project may range from approximately $862 to $1,014 million dollars.

4. Effects of the Alternatives

Socioeconomics

Under the No-Build Alternative, the projected increase in train volumes would result in increased rail delays and train idling. Populations within the study area, including minority and low-income populations, would be affected by reduced mobility, increased air emissions from idling trains and vehicles, and increased noise and vibration from the increase in train volumes. Noise would be above the FTA impact threshold at 1,099 residences, one park, and seven schools and churches, ground-borne vibration would be above the FTA impact threshold at 28 residences, and ground-borne noise (a type of vibration) would be above the FTA impact threshold at 57 residences.

The Build Alternative (i.e., the Preferred Alternative) would require the acquisition of 16 residential parcels consisting of a mix of occupied and unoccupied residential structures, 7 residential parcels of vacant land, 18 industrial parcels of vacant land, and one institutional facility. This would result in the displacement of 27 dwelling units and one community facility, the I Care Christian Center Ministries church. Fifteen of the 16 residential structures to be acquired, 23 of the 27 dwelling units, and the church are located in the neighborhood immediately south of Hamilton Park. Two residential structures containing four dwelling units are located in the vicinity of the Union Avenue viaduct. All acquisition and relocation would comply with the *Uniform Relocation Assistance and Real Property Acquisition Act*. The Build Alternative would not alter zoning or conflict with local or regional public policy initiatives.

The study area is comprised predominantly of minority populations and also includes extensive areas of low-income populations. Nearly any impact, whether beneficial or averse, would therefore be borne by Title VI and Environmental Justice populations as defined by Title VI of the Civil Rights Act of 1964 and Executive Order (EO) 12898. Based on findings presented in this document, the Build Alternative would result in disproportionate adverse impacts in three environmental resource areas: noise, vibration, and visual resources. To mitigate these impacts, a full range of measures under the IDOT/CREATE Program policies were investigated. Some of these measures were found to be effective and those have been incorporated into the project. The details of proposed mitigation strategies will continue to be developed and refined though the CSS process and in Phase II design. Details are discussed below and in Chapter 3.

- Noise – There would be 1,359 residential noise impacts (1,092 moderate and 267 severe), which is 260 more than in the No-Build Alternative. There would also be moderate noise impacts at three parks, temporary noise impacts during construction along the east side of the CSX railroad tracks, and interior noise impacts at the same seven schools and churches as the No-Build Alternative. Four noise barriers were found to be feasible and cost-effective mitigation measures for these noise impacts and are recommended for implementation.

However, the final decision on implementation of the recommended noise barriers will be made upon completion of the project design and the public involvement process.

- Vibration – There would be 755 ground-borne vibration and 77 ground-borne noise impacts. Mitigation measures considered included buffer zones, special rail trackwork, and maintenance practices. The acquisition of additional properties for buffer zones was not found to be feasible due to the additional community impacts that would be created. Welded rail joints are currently used by the railroads in the study area, but other special trackwork elements related to crossovers, switches, turnouts, and ballast mats were determined to not be feasible given the operational characteristics of the railroads in the corridor. Maintenance programs, including regularly-scheduled rail grinding, wheel truing, vehicle reconditioning, and use of wheel-flat detectors, will continue to be used by railroads in the study area, but would not eliminate vibration impacts. Additional details are provided in Section 3.7 of the EIS.
- Visual Resources - The two rail flyover structures would have adverse visual impacts on the adjacent residential areas. Landscaping will be used along the east side of the CSX railroad tracks and on remnants of parcels to be acquired in the area south of Hamilton Park to provide visual screening from these new structures. Aesthetic treatments for retaining walls, noise barriers, viaducts, and the flyovers are also under consideration, as is public art in the study area. Aesthetic treatments and use of public art will be coordinated with local stakeholders during Phase II (final) design through the CSS process.

Where disproportionately high and adverse impacts would remain, additional practicable mitigation and enhancement measures that could minimize impacts or provide offsetting benefits to the affected communities and individuals were evaluated based on the guiding principles established under EO 12898 and Title VI of the Civil Rights Act of 1964. Measures that would not be considered cost-effective or appropriate under the current IDOT or CREATE Program policies were evaluated under the flexibility provided by the FHWA's Environmental Justice Order 6640.23A in order to address concerns for equity and in consideration of the disproportionate impacts of the project. These measures, which are still being evaluated, could include bus stop improvements, bicycle facility improvements, sidewalk improvements, streetscape projects, funding to support existing job training programs, the inclusion of an additional noise barrier, the funding of the capital improvements necessary to implement a quiet zone on the UP Villa Grove rail line within the study area, remnant and vacant parcel improvements, as well as mortgage assistance for qualifying residential homeowners that would be displaced by the project. These specific additional measures—which are intended to address noise impacts, visual impacts, community impacts as well as local mobility needs—are detailed in Section 3.2.7. Additionally, a Technical Memorandum was prepared to assess the Environmental Justice mitigation measures, offsetting benefits and enhancement options (refer to Appendix B: Socioeconomics and Environmental Justice). The additional mitigation measures and offsetting benefits have been coordinated with the elected officials and CAGs, but they require further discussion

and development with the CREATE Partners, the involved agencies, the CAGs, potential implementing agencies, local officials, and residents of the study area. Stakeholder and public feedback are required to make final decisions regarding the implementation of the additional measures under consideration. Therefore, the measures presented in this DEIS will be presented at the public hearing to better determine the level of public support for each measure. Practicable mitigation measures with merit and support could be included in the Final Environmental Impact Statement (FEIS).

Due to the fact that impacts of the project would be predominantly borne by low-income and minority populations, IDOT and FHWA have determined that viewpoints of benefited receptors will be solicited for all recommended noise barriers (Barriers G, H, M, N, and O) as part of the public involvement process to help determine if there is merit and support for implementation of these recommended noise mitigation measures. It should be noted that the noise analysis area for the 75th Street CIP overlaps with the noise analysis area for the CREATE EW3 Project. Due to this nuance and the resulting consistency in the noise analysis results, noise abatement is currently recommended for both projects to mitigate predicted impacts to low-income and minority populations. The EW3 project, however, is fully funded for construction. Therefore, it is likely that the EW3 project would implement noise abatement in this area prior to 75th Street CIP. For this reason, IDOT and FHWA intend to solicit viewpoints of benefited receptors in the area of Barrier O as part of the EW3 Project.

The Build Alternative would also result in benefits to minority and low-income populations within the study area, including decreased train idling, improved regional air quality, improved local mobility and safety, and improved rail transit passenger services. The benefits from viaduct improvements to facilitate local mobility would primarily accrue to the minority and low-income populations within the study area.

The preliminary alternates that were initially considered, but not advanced for further evaluation, would have occurred within the 75th Street CIP study area which is comprised of predominantly minority populations and also includes extensive areas of low-income populations. The alternates for each improvement area (Forest Hill Junction/71st Street, 80th Street Junction, Metra SWS Connection to RID Line) would have resulted in similar noise and vibration impacts and also would have required property acquisition similar or greater to that of the Build Alternative. As a result, when compared to the Build Alternative, EJ populations would have been impacted similarly under the alternates that were initially developed.

Transportation

Freight rail traffic volumes in the No-Build Alternative would increase by 48% over existing volumes, totaling an average of 124 trains per day through the study area. The Build Alternative would add additional capacity, increasing the number of trips per day by 81% over the existing volumes to 152

trains per day. Travel times for freight would generally increase in the No-Build Alternative and decrease in the Build Alternative.

Roadway traffic volumes would increase slightly at most locations in the No-Build Alternative. The Build Alternative would eliminate delays at the 71st Street grade crossing, attracting approximately 20% more traffic than the No-Build Alternative. This would reduce volumes on parallel routes such as Marquette Road, 69th Street, and 79th Street. Delays at the other seven grade crossings in the study area would increase due to the higher freight train and motor vehicle traffic volumes, and longer average train lengths. Two of those seven grade crossings, at Columbus Avenue and at 95th Street, are programmed for elimination as separate projects in the CREATE Program. The Build Alternative would also close the Union Avenue viaduct, diverting approximately 700 northbound vehicles per day to Halsted Street (a 4.1% increase).

Passenger rail travel times would increase very slightly in the No-Build Alternative, while the Build Alternative would reduce travel times for the Metra SWS and Amtrak by approximately 2 minutes and 20 seconds. The Metra SWS would terminate at LaSalle Street Station instead of Union Station in downtown Chicago. Of the 79% of Metra passengers who walk from Union Station to their final destination, 45% would have a shorter or similar walk from LaSalle Street Station while 55% would have a longer walk. Passengers taking transit or other modes to their final destinations would mostly have similar travel times from either station, although results vary by destination.

The Build Alternative would include a range of improvements to roadway and sidewalk infrastructure at railroad viaducts that would benefit pedestrians, bicyclists, and motorists. With the No-Build Alternative, improvements at the many viaducts in the study area would be restricted to only those that could be funded through the City's limited capital improvements program.

Cultural Resources

Hamilton Park and the Hamilton Park Fieldhouse are both listed on the National Register of Historic Places. They are the only cultural resources within the study area that have been determined to be listed or eligible for inclusion on the National Register of Historic Places.

Neither the Build Alternative nor the No-Build Alternative would have any effect on the Hamilton Park Fieldhouse. The No-Build Alternative would increase noise levels by four decibels on the west side of Hamilton Park, enough to be perceptible, but not enough to be above the FTA impact criteria. The Build Alternative would not change noise levels on the west side of the park compared to existing conditions, but would increase noise levels on the east side of the park by three decibels due to the relocation of Metra SWS trains to the RID Line. This is not a large enough increase to be considered an impact.

There would be minor temporary construction impacts to a small area of Hamilton Park to allow construction of a retaining wall on railroad right-of-way. The Chicago Park District has noted their

intent to grant a construction permit for the work, and have expressed their opinion that the work would not adversely affect the historic attributes of the park. The disturbed area will be repaired according to a landscape plan to be approved by the Illinois Historic Preservation Agency (IHPA) and the Chicago Park District. The IHPA has concurred that the work would have no adverse effect on the historic elements of the park.

Air Quality

The proposed project would neither cause nor contribute to any new localized violations nor would it increase the frequency or severity of any existing NAAQS violations. The project satisfies the general conformity rules and achieves transportation air quality conformity. Additionally, fuel consumption would be reduced by approximately 20% with the implementation of the Build Alternative, resulting in reductions of locomotive emissions compared to the emissions expected with the No-Build Alternative. Therefore, the project would not adversely impact air quality, and no mitigation is required.

Noise

Throughout the entire study area, residential areas have been developed over the past century immediately adjacent to the rail corridors, and have been subject to high noise levels from train operations throughout those years. Under the No-Build Alternative, an increase in rail traffic is predicted over current volumes, and a total of 1,009 residences would be above the FTA moderate impact threshold and 90 more would be above the FTA severe impact threshold as described in the *CREATE Noise and Vibration Assessment Methodology, June 2013*. One park would be above the FTA moderate impact threshold, and an additional seven institutions would be above the FTA interior impact threshold.

For the Build Alternative, a total of 1,092 residences are predicted to experience moderate noise impacts and another 267 are predicted to experience severe noise impacts. Three parks would be moderately impacted. An additional seven institutional land uses would experience interior impacts. To mitigate the noise impacts associated with the Build Alternative, noise barriers were analyzed.

Noise barriers were considered to mitigate noise impacts in all affected areas. In many places, breaks in the barriers needed to accommodate existing grade crossings would substantially reduce their effectiveness, allowing noise to flow unimpeded to residences and institutional uses located near these breaks, reducing the number of benefited receptors. In other instances the density of benefited receptors and/or the severity of impact is not high enough to cost-effectively build a barrier. Twenty-one barriers were analyzed and four were determined to be cost-effective, benefiting a total of 189 residences and one park.

Vibration

As with noise, many of the residences adjacent to the rail corridors presently experience vibration from rail operations. In the No-Build Alternative, projections show a total of 28 residences would experience ground-borne vibration levels that would exceed the FTA impact threshold. A total of 57 residences and one child care center would experience ground-borne noise levels that would exceed the FTA impact threshold.

For the Build Alternative, ground-borne vibration impacts are projected at a total of 749 residences and 6 institutional locations which include one library, three churches, two schools, and one health care center. There are 77 residences with projected ground-borne noise impacts. The vibration impacts are distributed throughout the corridor and are caused primarily by the increased speeds of Metra and freight trains and the relocation of some track turnouts and crossovers due to rail realignments. Residences in the vicinity of Forest Hill Junction would also have increased ground-borne noise and ground-borne vibration from the use of the temporary tracks during construction as part of the Build Alternative. These temporary tracks are expected to be in use only during construction, which is expected to take about one year at this location.

Due to the heavy loads of the freight trains, there is little that can be done to substantially reduce the vibration impacts. The use of buffer zones is not a viable mitigation measure because the acquisition of adjacent properties would create additional impacts. Input from the rail industry CREATE partners indicated that special trackwork is not an acceptable mitigation option for track with very heavy freight traffic. Therefore, maintenance programs are the only viable vibration mitigation approach. The following maintenance procedures will be accomplished by the rail industry to mitigate vibration impacts through minimizing vibration sources: regularly scheduled rail grinding, wheel-truing programs, vehicle reconditioning programs, and the use of wheel-flat detectors.

Energy

By eliminating much of the train idling, the Build Alternative would use approximately 20% less energy in daily fuel usage than the No-Build Alternative. This reduction would eventually offset construction and maintenance energy requirements, resulting in a net savings in energy usage.

Natural Resources

The entire study area of the 75th Street CIP has been fully urbanized for many decades, and there are no remaining “natural” areas within the study area. No impacts are expected to any of the following resources:

- Wetlands
- Surface waters
- Groundwater
- Floodplains
- Water wells
- Agricultural lands
- Community gardens
- Protected Wildlife

Vegetation in the study area would be impacted by the Build Alternative, but not the No-Build Alternative. The new Metra RID connection structure would require the removal of a total of 8 street trees and 35 trees on private property of 6" diameter or greater, all of which would be replaced. New retaining walls constructed on railroad property adjacent to Leland Giants Park and the southeast corner of Hamilton Park would require clearing volunteer trees and ground cover, and minor vegetation clearing within the parks. A landscape restoration plan will be created in collaboration with the Chicago Park District for these locations. Lastly, some trees on property owned by the City of Chicago would be removed east of the existing CSX railroad tracks between 79th Street and 75th Street in order to construct temporary railroad tracks for use while the CSX structure at Forest Hill is constructed.

There are no records of any state or federally listed protected species within the project study area. The No-Build Alternative would have no effect on the limited wildlife within the project area. The Build Alternative may displace some common species that have adapted to the urban environment (e.g., squirrels, rabbits, opossums) to similar habitats along adjacent portions of the rail right-of-way. Contractors will be responsible for controlling nuisance species per City of Chicago municipal ordinance 13-32-325. No coordination with the Illinois Department of Natural Resources (IDNR) nor the U.S. Fish and Wildlife Service is necessary for this project.

Special Waste

The No-Build Alternative would not disturb any sites with recognized environmental conditions (RECs). The Preliminary Environmental Site Assessment (PESA) identified a number of sites having RECs that could be impacted by the Build Alternative. These include 48 sites with Low Risk, 34 sites with Moderate Risk, and 7 sites with High Risk of potential to impact the project work area. Any new areas added to the project as a result of changes to proposed mitigation measures will also be assessed for special waste. Preliminary Site Investigations (PSIs) are recommended for all 41 of the sites that are rated as Moderate or High Risks. The PSIs would be conducted prior to the completion of Phase II design and prior to any excavation or disturbance of soils for construction. Any required remediation would also be completed by the responsible agency.

Special Lands

Neither the No-Build Alternative nor the Build Alternative would require acquiring property from any of the public parks or other protected lands within the study area. There would be temporary construction activities in Leland Giants Park and the southeast corner of Hamilton Park in order to allow the contractor access to construct retaining walls on adjacent railroad property. The total area temporarily affected by the construction work would be approximately 5,565 square feet and 933 square feet, respectively. The area would be re-planted according to a landscape design plan developed in coordination with, and approved by, the Chicago Park District and, for Hamilton Park only, the IHPA. Both agencies have concurred that this work would have no adverse effect on the

Footnotes are listed at the end of this section

parks. In Leland Giants Park, an area of 0.12 acres of current railroad property located on the outside of the proposed retaining wall would be permanently ceded to the Chicago Park District.

There would be moderate noise level increases at Lily Gardens Park in the No-Build Alternative due to increased train volumes. The Build Alternative would eliminate this increase due to the relocation of the Metra SWS trains to the RID Line. However, the Build Alternative has noise increases at nine parks and noise impacts at three parks under the CREATE N&V Methodology criteria. The three parks with noise impacts are Fernwood Parkway Park, Leland Giants Park, and Wendell Smith Park. A noise barrier was studied for the area around Leland Giants Park and was found to be feasible and cost-effective. The barrier would reduce the sound levels at the park to below existing conditions. New bridges for the proposed Metra RID connection would also be visible from Leland Giants Park and the south portions of Hamilton Park. There would be no impacts to any Section 6(f) resources.

Visual Resources

Impacts to visual resources were evaluated on a scale from low to moderate to high, for both positive and negative impacts. For the Build Alternative, the construction of the new Metra RID connection structure through the neighborhood south of Hamilton Park (see Figure S-10) and the elevation of the existing CSX rail line for the Forest Hill flyover structure would have high negative visual impacts. The removal of trees, and the construction of temporary tracks east of the existing CSX rail line, would result in moderate negative visual impacts. New retaining walls along 75th Street, adjacent to Hamilton Park, and adjacent to Leland Giants Park; and the increased elevation of the new east-west Metra tracks east of Morgan Street would all result in low-magnitude negative visual impacts. Potential impacts to murals on four bridge abutments as a result of bridge rehabilitation and reconstruction was judged to be a neutral impact because the improved infrastructure conditions would offset potential damage to the murals. There are also several positive impacts to visual resources resulting from the project. A new bridge at 88th Street could have a low positive impact. Moderate positive impacts include bridges to be constructed or extended at seven existing viaduct locations, and repairs to infrastructure at 36 viaduct locations to address the local mobility concerns expressed by the community. Through the Context Sensitive Solutions design process, designers will continue to work with local community stakeholders regarding the potential to incorporate aesthetic enhancements into the major project elements, such as the viaducts, retaining walls, and treatments for the unused portions of right-of-way acquired for the project.

Figure S-10: Metra Rock Island District Connection Partial Rendering – Looking North from 7512 S. Parnell Avenue

Construction Impacts

The Build Alternative would be expected to take five or more years, and include several different construction contracts. Construction could result in temporary noise and vibration increases generated by trucks and heavy machinery, short-term increases in fugitive dust and equipment-related particulate emissions.

At Forest Hill Junction, two temporary railroad tracks would be constructed east of the current CSX alignment between 79th Street and Marquette Road to allow construction of the new CSX tracks. Residences located east of the alignment would experience increases in noise and vibration levels. These temporary tracks would be in use for a period of approximately one year. A new grade crossing for the temporary tracks would be installed at 71st Street, requiring a roadway closure for approximately two weeks.

Temporary street closures could be required at many locations to remove, rehabilitate, raise, or install railroad bridges, or to make local mobility improvements at viaducts. The method of construction will be determined during the design phase (Phase II), and these methods will determine the duration of the closures. Major bridge work could require street closures of up to three months at minor streets, and lane reductions and narrowing at busier streets. Roadway Traffic Management Plans will be prepared for each construction contract to address local access, any needed roadway detours, and access for emergency services.

There would be limited construction activities within small areas of Hamilton Park and Leland Giants Park for several months to construct new retaining walls on railroad property. In both parks,

the affected area would be about 15 feet in width along the outer park boundary. The construction areas would be fenced off, the remainders of both parks would be available for use during the construction periods, and general access to the parks would not be affected.

Indirect and Cumulative Impacts

Potential indirect effects from the Build Alternative are related to increased rail volumes and new rail flyover construction. Direct encroachment by the new flyover, as well an additional increase in noise and vibration from the increase in freight volumes could lead to reduced neighborhood desirability and adversely affect property values. Overall, the Build Alternative would not substantially affect property values within the study area as the majority of the homes were built around the railroad alignments and currently experience noise and vibration impacts from passing trains. However some properties, such as those with more noticeable noise, vibration, and visual impacts due to encroachment of new infrastructure and increased proximity to the rail line, may be adversely affected. Other homes within the study area, however, stand to benefit from decreased noise and vibration impacts, as well as improved aesthetics, safety, and mobility resulting from the viaduct improvements. These improvements could improve neighborhood desirability and increase property values.

Rail traffic associated with the Build Alternative would continue along the existing rail corridors that extend beyond the limits of the 75th Street CIP study area. Highway-rail grade crossings outside the study area may experience an increase in delays. Although congestion may occur at some crossings, one of the goals of the CREATE Program is to eliminate congestion and conflicts between rail traffic and roadway traffic. Under the CREATE Program, 25 at-grade crossings would be eliminated, which would result in a substantial benefit of improved safety and mobility. Areas beyond the study area may also experience an increase in noise and vibration resulting from the increase in freight traffic. Where sensitive receptors are located at a similar distance from the tracks, the increase in rail traffic would likely result in similar noise impacts as identified for the Build Alternative.

The Build Alternative would shift the Metra SWS from the CWI line to the RID Line at the east end of the 75th Street corridor. This would mean that the SWS would then arrive in downtown Chicago at the LaSalle Street Station rather than its present terminal at Union Station. This could create a potential increase in rail/vehicular/pedestrian traffic around LaSalle Street Station resulting from the shift of Metra SWS service. Conversely a potential decrease in rail/vehicular/pedestrian traffic could occur at Union Station. Metra has indicated that there is adequate capacity to accommodate the extra trains at LaSalle Street Station. The additional capacity that would be freed up at Union Station would reduce projected increase in future track and pedestrian congestion, and potentially allow the future expansion of Metra, Amtrak, and high speed rail services.

The Build Alternative analysis takes into account the cumulative impacts from other projects that are part of the CREATE Program. Any additional increase in train traffic from other non-CREATE

projects is anticipated to be minimal and would not contribute to additional cumulative noise/vibration or transportation effects.

Impact Summary

A summary of the environmental impacts of the recommended Preferred Alternative is provided in Table S-4.

Table S-4: Summary of Environmental Consequences

Resource Category	Build Alternative	No-Build Alternative
Physical Characteristics		
New track added (miles, net) – new construction	29.44	0
New track added (miles, net) – realignment	10.77	0
Rail flyovers added (number)	2	0
Viaducts with major improvements (number)	36	0
Private property to be acquired (acres)	15.4	0
Public (city) right-of-way to be used (acres)	1.3	0
Estimated right-of-way cost (2013)	$8 – 10 M	0
Estimated planning and design cost (2013)	$33 M	$10.4 M [c]
Estimated construction cost (2013)	$666 – 786 M	0
Total estimated project cost[a] (2013)	$707 – 829 M	$10.4 M
Total estimated project cost (Year of Expenditure[b])	$862 – 1,014 M	$10.4 M
Socioeconomics		
Total parcels to be acquired (number)	42	0
Residential parcels to be acquired - occupied (number)	15	0
Residential parcels to be acquired - unoccupied (number)	1	0
Vacant parcels to be acquired (number)	25	0
Institutional parcels to be acquired (i.e., church)	1	0
Dwelling units displaced (number of households)	27	0
Occupied dwelling units displaced	26	0
Unoccupied dwelling units displaced	1	0
Commercial establishments displaced (number)	0	0
Transportation		
Metra SWS travel times through study area	10 min, 16 sec	12 min, 36 sec
Amtrak Cardinal travel times through study area	8 min, 0 sec	10 min, 20 sec
Metra SWS terminus in downtown Chicago	LaSalle Street Station	Union Station
Average daily freight trains moved through study area (number)	152	124
Annual freight cars moved through study area (number)	4,184,749	3,412,184

Resource Category	Build Alternative	No-Build Alternative
Rail grade crossings eliminated (number)	1	0
Gate-down time at 71st Street crossing (minutes per day)	0	207
Local streets closed (number)	1	0
Viaducts with major improvements (number)	36	0
Cultural Resources and Special Lands		
National Register-eligible historic properties affected (number)	0	0
Public parks with increases in noise above the FTA threshold (number)	3	1
Public parkland to be acquired (acres)	0	0
Nature/Forest preserves, nature trails affected (number)	0	0
Properties protected by Section 6(f) affected (number)	0	0
Archaeological sites/resources affected (number)	0	0
Air Quality		
Project in Conformity with State Implementation Plan	Yes	N/A
Air quality impacts	No	No
Noise		
Residences above the FTA moderate impact threshold (number)	1,092	1,009
Residences above the FTA severe impact threshold (number)	267	90
Institutional facilities above the FTA moderate impact threshold (number)	3	1
Institutional facilities above the FTA interior impact threshold (number)	7	7
Vibration		
Properties with ground-borne vibration levels above the FTA threshold (number)	755	28
Properties with ground-borne noise levels above the FTA threshold (number)	77	58
Energy		
Total rail fuel usage (gallons/day)	4,311	5,420
Natural Resources		
Forest areas affected (acres)	0	0
Neighborhood trees removed (number)	43	0
Protected species affected	No	No
Water Resources		
Wetlands affected	No	No
Streams or surface waters affected	No	No
Floodplain affected	No	No

Resource Category	Build Alternative	No-Build Alternative
Water wells affected (number)	0	0
Special Waste		
High-risk sites potentially affected (number)	7	0
Medium-risk sites potentially affected (number)	34	0
Low-risk sites potentially affected (number)	48	0
Visual Resources		
Viaducts with major improvements (number)	36	0
Rail flyovers added (number)	2	0

[a] The "total estimated project cost" includes right-of-way costs, planning and design costs, and construction costs.
[b] The year of expenditure costs include the effects of inflation.
[c] The No-Build Alternative includes the Phase I cost of the project (planning and preliminary engineering).

Environmental Commitments

In addition to these project-specific mitigation commitments summarized in this section, all construction will comply with applicable local ordinances, as well as federal and state laws. Environmental issues addressed by such ordinances and laws include, but are not limited to, practices such as the control of dust at construction sites and stormwater management:

- *Right-of-way acquisition* – The acquisition of private property will be completed in accordance with the federal *Uniform Act*[6] and the *IDOT Land Acquisition Manual*.[7] Just compensation will be provided for property to be acquired. The fair market value will determined by appraisers hired by the organization responsible for the property acquisition.

- *Environmental Justice* – Disproportionate adverse noise, vibration, and visual impacts on Title VI and Environmental Justice populations as defined by Title VI of the Civil Rights Act of 1964 and EO 12898 would occur. Measures considered under the IDOT/CREATE Program policies which were found to be effective, and have been incorporated into the project, include: reasonable and feasible noise barriers, vibration mitigation involving routine maintenance procedures designed to minimize vibration sources and visual impact screening.

  Even with the implementation of these mitigation measures, disproportionately high and adverse impacts on minority and low-income populations would remain. As such, additional practicable mitigation and enhancement measures (those not considered under the current IDOT or CREATE Program policies) that could minimize impacts or provide offsetting benefits to the affected communities and individuals were evaluated under the flexibility provided by the FHWA's Environmental Justice Order 6640.23A in order to address concerns for equity and in consideration of the disproportionate impacts of the project. These additional mitigation measures and offsetting benefits could include: one additional noise barrier, funding of the

capital improvements necessary to implement a Quiet Zone on the UP Villa Grove rail line within the study area, bus stop improvements, sidewalk improvements, new or improved bicycle facilities, streetscape amenities, funding to support existing job training programs, remnant and vacant parcel improvements, as well as mortgage assistance for qualifying residential homeowners that would be displaced by the project. These specific additional measures—which are intended to address noise impacts, visual impacts, community impacts as well as local mobility needs—are detailed in Section 3.2.7.

Each of the additional measures and offsetting benefits under consideration will require further discussion and refinement with the CREATE Partners, the involved agencies, potential implementing agencies, the CAGs, local officials, and residents of the study area. This input will be gathered during the DEIS comment period and a final decision on additional mitigation measures and offsetting benefits will be discussed in the FEIS.

- *Traffic during construction* – Construction activities for the Build Alternative have the potential to affect traffic on project area roadways. A Traffic Management Plan, developed in coordination with the relevant public agencies and local officials, will be required for each major construction contract.

- *Noise and vibration* – The use of pile-driving, if determined to be necessary, will adhere to all applicable City of Chicago ordinances for noise and vibration. Contract documents will require the contractor to coordinate with local schools to schedule pile driving activities so as to not interfere with State of Illinois mandated testing periods.

  The following maintenance procedures will be accomplished by the rail industry to mitigate vibration impacts through minimizing vibration sources: regularly scheduled rail grinding, wheel-truing programs, vehicle reconditioning programs, and the use of wheel-flat detectors.

  The noise and vibration analysis for this project may be reassessed if: a) the project is revised in a manner in which impacts of the project may change due to the project revisions (e.g., a new track alignment is moved closer to a receptor), or b) the CREATE Program's train model is updated due to projects being removed from or added to the CREATE Program.

  Based on the preliminary design, four noise barriers are likely to be implemented, benefiting 189 residences and one park: Barrier G (benefitting NEA R10), Barrier H (benefitting NEA R11), Barrier M (benefitting NEA R14/15), and Barrier N (benefitting NEA R17). A fifth barrier is being considered to mitigate impacts to low-income and minority populations. This barrier, Barrier O (benefitting NEA R18) would benefit 57 residences. The final decision on the implementation of recommended noise mitigation measures will be made upon the completion of the project design and the public involvement process.

Due to the fact that impacts of the project would be predominantly borne by low-income and minority populations, IDOT and FHWA have determined that viewpoints of benefited receptors will be solicited for all recommended noise barriers (Barriers G, H, M, N, and O) as part of the public involvement process to help determine if there is merit and support for implementation of these recommended noise mitigation measures. It should be noted that the noise analysis area for the 75th Street CIP overlaps with the noise analysis area for the CREATE EW3 Project. Due to this nuance and the resulting consistency in the noise analysis results, noise abatement is currently recommended for both projects to mitigate predicted impacts to low-income and minority populations. The EW3 project, however, is fully funded for construction. Therefore, it is likely that the EW3 project would implement noise abatement in this area prior to 75th Street CIP. For this reason, IDOT and FHWA intend to solicit viewpoints of benefited receptors in the area of Barrier O as part of the EW3 Project.

- *Visual Screening* – Landscaping would be installed on the remnant portions of those parcels acquired for construction of the proposed rail flyover south of Hamilton Park to visually screen the view of the proposed structure. Landscaping would also be used along the east side of the CSX railroad tracks to minimize visual impacts of the proposed rail flyover at Forest Hill Junction.

- *Preliminary Site Investigations* – A PSI will be completed in the vicinity of the 41 sites in 14 general areas ranked as having a moderate or high Risk Finding as identified by the PESA. The PSIs would be conducted prior to the completion of Phase II design and prior to excavation or disturbance of soils for construction. Required remediation would also be completed by the responsible agency.

- *Tree replacement* – Public street trees, landscape trees, and all other trees over six-inch diameter not located on railroad property will be replaced on a one-for-one basis. The locations of all tree replacements will be coordinated with the City of Chicago Bureau of Forestry during Phase II design.

- *Control of nuisance species* – Contractors will control nuisance species, such as rodents, to protect the adjoining residential areas per City of Chicago municipal ordinance 13-32-325.

- *Hamilton Park and Leland Giants Park* – Landscaping plans will be developed and implemented to restore the areas of the parks affected by construction in coordination with the Chicago Park District. At Hamilton Park, the landscape plan will also be coordinated with and approved by the Illinois Historic Preservation Agency.

- *Damen Avenue Bridge façade* – Although the Illinois Historic Preservation Agency has determined the bridge to not be eligible for listing on the National Register, they recognized that the structure has aesthetic merit. Coordination will continue with the Illinois Historic Preservation Agency during Phase II design to ensure the Damen Avenue viaduct Art-Deco

façade and railing that currently exists will be replaced in-kind and replicated to the extent feasible.

- *Consultation with local stakeholders* – IDOT and the CREATE Partners will work with local stakeholders during the Phase II design to provide them with opportunities for input on various design features and other aspects of the work affecting the neighborhoods.
- *Additional Special Waste Studies* – Prior to publication of the FEIS, IDOT will determine if additional special waste studies are necessary. The re-evaluation process will follow the policies and procedures contained in the IDOT BDE Manual and the CREATE Program Rail Projects Phase I Reports and Design Approval Procedures Manual.
- *Final Bridge Plans* – During the Phase II design, the individual railroads or their consultants/contractors will coordinate the development of all bridge plans with the IDOT Bridge Office to allow for all required reviews.
- *Environmental Survey Request (ESR) Addendum* – Prior to the publication of the FEIS, IDOT will assess unmitigated noise and vibration impacts to structures through its ESR process. The primary purpose of this effort will be to assess the potential for impacts to cultural resources such as historic buildings. Potential impacts to biological and cultural resources will also be evaluated in select areas where design refinements have been made to accommodate recommended noise mitigation measures and address other stakeholder comments.

5. Public Involvement

An extensive, targeted public involvement program was implemented by IDOT for the CREATE 75th Street CIP. The goal of the program was to ensure that all interested stakeholders were provided meaningful opportunities to be involved in the project. The 75th Street CIP used *Context Sensitive Solutions (CSS)* design principles to help develop transportation solutions that reflect the values and concerns of the neighborhoods and communities surrounding the project.

A *Stakeholder Involvement Plan* was developed as a guide for the project's public outreach efforts. The study team met early with local and state elected officials through an initial round of meetings to introduce the project, to outline the general transportation problems in the study area, and to ask for input on the project and the communities in the study area. The study team established two Community Advisory Groups (CAGs) made up of residents and community leaders. Both the CAGs and the elected officials made clear to the study team the importance of the 75th Street CIP in producing much needed jobs and responding to the poor conditions of the viaducts in the study area. These early meetings served as the foundation to develop a preliminary draft of the project's Purpose and Need statement.

A project website (www.75thcip.org), fact sheets, brochures, and email notices were used to disseminate information about the project. Public input was obtained through several meetings with

the CAGs, two general public meetings (in June and October, 2011), meetings with elected officials and other groups, comment forms, and feedback from the project website. To promote the two public meetings, the project team placed advertisements in daily and weekly newspapers, emailed notices, hung posters in each of the 12 Metra SWS stations, mailed postcard announcements, and hired a local firm to place door hanger notices in targeted areas where community input was most critical to deciding among transportation solutions.

At the second public meeting, held on October 27, 2011, the study team presented a Range of Alternatives and asked the community for its input. Based on input from the public at that meeting, the Build Alternative for 75th Street CIP was refined in three areas:

- *Local mobility and viaducts* – Capital improvements were included at 36 of the 37 viaducts. It was decided to close the Union Avenue viaduct (see below).
- *Metra SWS connection to the RID Line* – Alternate RI-1 was advanced for further evaluation.
- *Union Avenue viaduct* – The Union Avenue viaduct was recommended to be closed to through traffic rather than constructing three new bridges and lowering the street profile.

The Build Alternative was coordinated closely with all of the concerned stakeholders involved in the study, including the CAGs, local elected officials, and other interested local groups, as described in detail in Chapter 4. Based on the analysis presented in this document and the stakeholder input provided throughout the study process, the Build Alternative has been recommended as the Preferred Alternative.

At the fifth CAG meeting, held on December 12, 2013, the study team presented the potential benefits and the environmental impacts of the 75th St. CIP. The project team also presented the recommended mitigation measures and additional mitigation measures that are under consideration. The Community Advisory Groups and the project team discussed these benefits, impacts, and mitigation measures so that their input could be incorporated into the DEIS. No new concerns were identified. The Joint CAG was in general agreement with the recommended mitigation measures to be presented in the Draft EIS.

A formal public hearing to solicit public and agency feedback will be held following publication of this Draft EIS. The public will be notified of these hearing and the availability of the Draft EIS through the same methods and media used to publicize the public information meetings. Notification techniques will be in compliance with NEPA, IDOT public involvement procedures, and other applicable regulations. The public comment period following the hearing will be a minimum of 30 days.

6. Other Proposed Actions

Other proposed actions that are either in the study area or affect the study area include, but are not limited to, those that are included in the 2010-2015 Transportation Improvement Program (TIP), the

fiscally constrained projects in CMAP's *GO TO 2040 Comprehensive Regional Plan*, and the CREATE Program. These projects include the addition of a third track to the Metra RID Line, the construction of the West Loop Transportation Center, high speed inter-city passenger rail between Chicago and St. Louis, a new train station on the Metra RID Line at 78th Street, highway-rail grade separation projects at Columbus Avenue (GS11) and 95th Street (GS21a), and CREATE project WA 10 in Blue Island, IL. The models used to forecast train volumes for the Build Alternative also assume that all other CREATE Program projects will be implemented. These projects and others are listed in Table 3.17-3.

7. Areas of Controversy

As of the publication of the Draft EIS, there are no current areas of controversy on the project.

8. Unresolved Issues With Other Agencies

As of the publication of the DEIS, there are no unresolved issues with any federal, state, or local agencies.

The 75th Street CIP has been coordinated with the Illinois NEPA/404 agencies at three meetings, at which the project Purpose and Need, the project Range of Alternatives, and the Recommended Preferred Alternative have been presented. No major issues have been raised by the NEPA/404 agencies (see Section 4.2.2).

9. Other Federal Actions Required for the Proposed Action

The project is not anticipated to affect any waters of the United States and would therefore not require a Section 404 permit under the Clean Water Act, nor would a Section 401 Water Quality Certification be required. The project would result in the disturbance of one or more acres of total land area, and therefore be subject to the requirement for a Section 402 National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges from the construction sites. Permit coverage for the project will be obtained either under the Illinois Environmental Protection Agency (IEPA) or under an individual NPDES permit. No other federal permits are anticipated.

Funding for the project is anticipated to come from a combination of sources, including federal and state transportation funds and contributions from the involved private railroads. At present, no funding has been committed for either right-of-way acquisition or construction of the project. Commitments will be required before those project development activities can commence.

10. Next Steps

This DEIS presents information on the specific transportation problems in the 75th Street CIP study area, the process used to develop and evaluate alternative solutions, and the effects that those alternatives would have on the study area and its residents. The DEIS also discusses agency and

stakeholder involvement, as well as potential minimization/mitigation measures for any potential negative effects of the project.

The general public and other interested parties can submit their comments on the DEIS within the specified comment period, which begins with the date of publication of the Notice of Availability of the Draft EIS. A public hearing will be held during the comment period at which comments can also be offered. Comments can also be submitted through the project website at www.75thcip.org or by writing to IDOT at the address listed on the front cover page of this document.

IDOT and FHWA will evaluate all comments received, appropriately respond to them, and consider them fully in selecting a Preferred Alternative. They will then publish a Final EIS that addresses the comments received and identifies the Preferred Alternative. If no substantive comments are received on the DEIS that require substantial changes to the Preferred Alternative, IDOT and FHWA will also issue at the same time a Record of Decision document that identifies the Selected Alternative and the reasons for that selection. If substantial changes to the Preferred Alternative are required, a Final EIS will be published presenting those changes and distributed to the public through the same channels used for this DEIS document. Following the comment period on the FEIS, FHWA and IDOT will then prepare and distribute the Record of Decision document.

Endnotes:

[1] Association of American Railroads, Chicago Department of Transportation, Chicago Transportation Coordination Office, Federal Highway Administration, Federal Railroad Administration, Federal Transit Authority, and Illinois Department of Transportation. *Final Feasibility Plan Amendment 1 (Modified)*. Publication. January, 2011. Print.

[2] Association of American Railroads, Chicago Department of Transportation, Chicago Transportation Coordination Office, Federal Highway Administration, Federal Railroad Administration, Federal Transit Authority, and Illinois Department of Transportation. *CREATE Program Final Feasibility Plan*. Appendix A. August, 2005. Print.

[3] Chicago Transportation Coordination Office. *"CRIS Case3-L73(R1)"*, RTC Version 2.70 L61s. Tech. 28 April 2011. Print.

[4] Illinois Commerce Commission. Crossings Impacted by CREATE. 8 July 2003. Raw data.

[5] Association of American Railroads, Chicago Department of Transportation, Chicago Transportation Coordination Office, Federal Highway Administration, Federal Railroad Administration, Federal Transit Authority, and Illinois Department of Transportation. *CREATE Program Final Feasibility Plan*. Page 45. August, 2005. Print.

[6] Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, CFR 49, Part 24.

[7] Illinois Department of Transportation, Land Acquisition Policy Procedure Manual and Revisions, November, 2011; http://www.dot.state.il.us/landacq/lappm.html.